

Application No. 09/727,174  
Group Art Unit: 2182

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7/10/03

### REMARKS/ARGUMENTS

This Amendment is intended to be a complete response to the Office Action of March 12, 2003 and the case is believed to be in condition for allowance. Accordingly, reconsideration is respectfully requested.

#### Status of the Claims

Claims 32-45 are pending in the application. Claims 32-45 were rejected in the Office Action. Claims 32 and 37 are amended herein. Claims 38, 39 and 40 are cancelled herein without prejudice. New Claims 46-53 are added herein. The originally filed application discloses the limitations of these claims. No new matter has been added.

#### The Claims

##### 35 USC 112, first paragraph

The Examiner rejected Claim 33 for containing subject matter, which was not described in the specification in an enabling manner. Applicants respectfully traverse the rejection.

The Examiner asserted that "a special packet" is not adequately described in the specification. That is incorrect. On page 7, line 13, the specification states "The terminal 32 then responds with a special packet having a length which is equal to the length indicated by the smart card 31." A person of ordinary skill would realize many ways of setting one packet apart from other packets. This could, for example, be accomplished by having a field in the packet with a code unique to the special packet or merely by setting a flag in the packet. These are implementation details well within the scope of skill of a person of ordinary skill and are therefore not necessary to provide an enabling disclosure.

Claim 33 satisfies the requirements of 35 USC 112, first paragraph. Accordingly, Applicants respectfully request the withdrawal of the rejection under 35 USC 112, first paragraph.

##### 35 USC 112, second paragraph

The Examiner rejected claim 32 for being indefinite.

Application No. 09/727,174  
Group Art Unit: 2182

Claim 32 has been amended and now satisfies the requirements of 35 USC 112, second paragraph. Accordingly, Applicants respectfully request the withdrawal of the rejection under 35 USC 112, second paragraph.

### 35 USC 102

Claims 37-40 and 42 were rejected under 35 USC 102(e) as being anticipated by Shona (U.S. Patent Number 5,790,885). Applicants traverse the rejection.

### Claim 37

Claim 37 recites "a smart card comprising: ... means operable to request terminal resources."

Anticipation under 35 U.S.C. 102(e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). This is well-settled law. *See e.g., Celeritas Technologies, Ltd. v. Rockwell*, 150 F.3d 1354 (Fed. Cir. 1998), *citing, RCA Corp. v. Applied Digital Data Systems, Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed.Cir.1984); *Radio Steel & Mfg. Co. v. MTD Products, Inc.*, 731 F.2d 840, 845, 221 USPQ 657, 661 (Fed.Cir.1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed.Cir.1983); *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed.Cir.1983); *SSIH Equipment, S.A. v. U.S. Int'l. Trade Comm'n.*, 718 F.2d 365, 377, 218 USPQ 678, 688 (Fed.Cir.1983).

Shona does not teach a "smart card ... comprising: means operable to request terminal resources." The Examiner points to Figure 3 – elements 70, 40, 46, 50, 42 and Column 2, lines 8-30 for this teaching. However, the cited figure and passage fails to even suggest a smart card with "means operable to request terminal resources."

Element 70 is an IC card. However, the inner workings of the IC card are not shown. Element 70 by itself could thus not be "means operable to request terminal resources." Element 40 is an IC Card reader/writer. Thus, it cannot be a "smart card ... comprising: means operable to request terminal resources." Elements 46, 50, and 42 are

Application No. 09/727,174  
Group Art Unit: 2182

components of the IC Card Reader/Writer 40 and could thus not be a teaching of a "smart card ... means operable to request terminal resources."

The passage in Col. 2, lines 8-30 is a summary of Shona's invention. It discusses "a method of controlling an IC card reader/writer" (line 9), how to connect a transmission line and reception lines, retransmission of a character in the event of framing error, transmission of a next character if there is no framing error, and so on. There is no mention in this passage (or anywhere else in Shona) of the IC card requesting terminal resources.

Thus, since Shona does not teach each and every element set forth in Claim 37 (frankly, it appears to not teach any element of Claim 37), Claim 37 is not anticipated by Shona and should be allowed.

#### Claims 38, 39 and 40

Claims 38, 39 and 40 are cancelled herein.

#### Claim 42

Claim 42 recites "the terminal having a means for simulating asynchronous communication with the smart card." Page 7, line 1- Page 8, line 6 of the description describes how a system that is limited to synchronous communication can be made to appear (i.e., simulated) to have asynchronous communication. Shona does not teach or suggest a terminal for simulating asynchronous communication with the smart card. Accordingly, Claim 42 is not anticipated by Shona and should be allowed.

#### 35 USC 103

Claims 32-36, 41 and 45 were rejected under 35 USC 103(a) as unpatentable over Shona (U.S. Patent Number 5,790,885) as applied to claims 37 and 42, and further in view of Anderl et al. (U.S. Patent Number 4,816,653). Applicants traverse the rejection.

Application No. 09/727,174  
Group Art Unit: 2182

Claim 32 sets forth a specific protocol "to simulate asynchronous communication between the smart card and smart card terminal such that either the smart card or the smart card terminal may operate as master and the other as slave", i.e., where either can initiate communication. This protocol allows the smart card to start a communication even when the terminal has not sent it a request. To ensure that there is an adequate time window available on the link, the card and the terminal perform a handshake operation that entails the smart card telling the terminal the length of a message the smart card intends to send, the terminal responding to the smart card with an indication to commence communication, and the smart card sending a message containing the data. However, because conventional smart card systems do not allow for a smart card to initiate communication, a preliminary couple of steps are performed. Even if the terminal has nothing to communicate to the smart card, it sends the smart card a polling packet and upon receipt of the polling packet, the smart card responds with the message to initiate the communication.

Claim 32 recites "sending a first message from the smart card terminal to the smart card, wherein if the smart card terminal has no data to send the smart card, the first message is a polling packet;

receiving the first message at the smart card;

upon receipt of the first message, if the smart card has data to send, sending a second message from the smart card to the terminal containing a length of data indication;

upon receipt of the second message from the smart card, sending a third message from the terminal to the smart card as an indication from the terminal to the smart card to commence sending the data; and

sending a message containing the data from the smart card to the terminal."

Application No. 09/727,174  
Group Art Unit: 2182

Applicants have reviewed both Shona and Anderl. This review has not revealed any hint of a system in which the smart card initiates a communication with the terminal. It is therefore not surprising, that both these references similarly fail to teach or suggest the protocol described in the specification and claimed in Claim 32 allows a smart card to initiate communication in response to receiving a polling packet from the terminal when the terminal has no data to communicate to the smart card.

The Examiner asserts that Shona discloses a method of operating a smart card and smart card terminal to simulate asynchronous communication. This is incorrect. Shona states that "an IC card reader/writer 40 ... and has a function to execute a command transmission/receive processing for an IC card 70 meeting a T=0 protocol as described in [ISO and IEC 7816-3, 1989]. According to the ISO 7816-3 standard, T=0 is an asynchronous protocol. Therefore, there would be no need for Shona to teach a method of *simulating* asynchronous communication. Applicants solve a problem of giving the appearance of asynchronous communication to higher level processes while the lower level card-terminal communication is synchronous.

The Examiner has correctly pointed out that "Shona fails to explicitly set forth the limitation of a polling packet and sending a second message containing a length of data indication." Office Action, paragraph 11. The Examiner asserts that one of ordinary skill in the art would have been motivated to modify Shona to include a polling packet and a message containing a length of data indication. To establish a prima facie case for obviousness based on a modification of a reference, either the reference or the knowledge generally available to one of ordinary skill in the art must provide the suggestion or motivation for the modification. Shona teaches the use of an asynchronous protocol. In asynchronous communication either station may communicate whenever it desires to do so. Thus, there would be no reason to modify Shona in such a way that polling packets are sent to the card.

The Examiner makes the assertion that "[o]ne of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous

Application No. 09/727,174  
Group Art Unit: 2182

for the method of Shona to be implemented using a polling packet to gather the status/control information of the smart card and a message containing a length of data indication to check whether the transmission/receive buffer in the smart card reader/writer has enough memory available to store incoming data." The Examiner is here engaging in changing the ordinary meaning of the terminology used in this application. Applicant invites the Examiner to consider the following definition of *polling* from webopedia.com <http://www.webopedia.com/TERM/p/polling.html>:

- (1) Polling is a CAM. In a master/slave scenario, the master queries each slave device in turn as to whether it has any data to transmit. If the slave answers *yes* then the device is permitted to transmit its data. If the slave answers *no* then the master moves on and *polls* the next slave device. The process is repeated continuously. Also see contention and token passing.
- (2) Making continuous requests for data from another device. For example, modems that support polling can call another system and request data.

Thus, a "polling packet" is *not* used to "gather the status/control information of the smart card." That would be some ordinary inquiry of the smart card. Rather, polling is used to determine if a slave has something to send to a master. Thus, accepting, for the sake of argument, the Examiner's premise that the reader would require status/control information of the smart card, sending a request to the card to provide that information would not be a *polling* message, but rather a conventional command to the card to furnish some information.

The Examiner erroneously asserts that Anderl "teaches a use of polling packet and sending a message containing length of data indication" citing in particular Col. 10, lines 10-37, 46-67, col. 11, lines 1-9, and col. 6 lines 24-32. Applicant again invites the Examiner to consider the above-cited definition of polling from webopedia.com. Accepting that definition, the disclosure of Anderl cannot be considered either to teach or suggest use of a polling packet or of sending a message containing length of data indication. On the contrary, Anderl states that "a packet contains control information as to where the data begins and end in the packet". Anderl, Col. 10, lines 17-20. Thus, there would be no reason for Anderl to send a message containing a length of data indication and it is therefore not surprising that Anderl is devoid of such a disclosure.

Application No. 09/727,174  
Group Art Unit: 2182

Accordingly, Claim 32 is patentable over Shona or Anderl, taken singly or in combination, and should be allowed.

Claims 33 through 36 depend from Claim 32, incorporate all the limitations thereof, provide further unique and non-obvious combinations, and are patentable over Shona and Anderl for the reasons given above in support of Claim 32 and by virtue of such combinations.

Claim 41 depends from Claim 37. As noted above Shona does not teach or suggest a smart card comprising "means operable to request terminal resources". Anderl similarly does not teach or suggest a smart card comprising "means operable to request terminal resources." Therefore, a combination of Shona and Anderl would not contain such a disclosure. Accordingly, Claim 37 would be patentable over Shona and Anderl, taken singly or in combination. It therefore follows that since Claim 41 depends from Claim 37, incorporates all the limitations thereof, Claim 41 is patentable over Shona and Anderl, taken singly or in combination.

Claims 43 through 45 depend from Claim 42 and incorporate all the limitations thereof. As noted above Claim 42 recites "the terminal having a means for simulating asynchronous communication with the smart card" which is neither taught nor suggested by Shona. Anderl also does not teach or suggest "the terminal having a means for simulating asynchronous communication with the smart card". Therefore, Claim 42 is patentable over Shona and Anderl taken singly or in combination.

Application No. 09/727,174  
Group Art Unit: 2182

Official

7/10/03

CONCLUSION

It is submitted that all of the claims now in the application are allowable. Applicants respectfully request reconsideration of the application and claims and its early allowance. If the Examiner believes that the prosecution of the application would be facilitated by a telephonic interview, Applicants invite the Examiner to contact the undersigned at the number given below.

The only fee believed to be due in connection with this Response is the fee for the Extension of Time. If Applicant is in error as to these fees, the Commissioner is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account 19-0597.

Respectfully submitted,



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Date: July 10, 2003

Enclosures:

1. Facsimile Transmittal Sheet (1 page)
2. Transmittal Form (1 page)
3. Certificate of Transmission by Facsimile (1 page)
4. Combined Amendment & Petition for Extension of Time (2 pages) and duplicate copy of page 2

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